CLAIMS:

1. (Withdrawn) A diagnostic tool for use in diagnosing diseases, said tool comprising detection means for detecting a presence of an array of markers indicative of a specific disease.

2. (Withdrawn) The diagnostic tool according to claim 1, wherein the disease is selected from the group consisting essentially of cancer, infectious diseases, and auto-immune diseases.

3. (Withdrawn) The diagnostic tool according to claim 1, wherein said detection means is selected from the group consisting essentially of an assay, a slide, and a filter combination.

4. (Withdrawn) The diagnostic tool according to claim 1, wherein said detection means is a two-color detection system.

5. (Withdrawn) A combination of markers for diseases, said array comprising at least two markers for disease.

6. (Withdrawn) The combination of markers according to claim 5, wherein said combination is a marker for stages of cancer.

7. (Currently amended) A method of detecting and identifying a combination of markers for diagnosing presence indicative of a disease state or determining disease stage, said method comprising the steps of:

differentially biopanning sera obtained from a normal individual and patients patient with the disease against phage display libraries expressing cDNA of genes expressed by diseased cells test sera to obtain epitope-bearing clones displaying reactivity to antibodies present in sera of patients with disease but not in sera of normal individuals to array for analysis; and

identifying the epitope bearing clones that are present only in the disease stage, thereby detecting markers of disease. ~~determining if the markers included among cDNA clones indicative of the disease by comparing the obtained by said differentially biopanning step to an array of known markers of disease.~~

8.   (Currently amended) The method according to claim 7, wherein said determining step includes using a computer to automatically analyze ~~analyzing~~ results of said biopanning step ~~using software~~.

9.   (Canceled).

10.   (Withdrawn) A kit for screening for the presence of disease markers, said kit comprising a diagnostic tool according to claim 1 and carrying means for carrying and storing said diagnostic tool.

11.   (Withdrawn) Epitopes found using the method of claim 7.

12.   (Withdrawn) A method of detecting disease by:
analyzing a pool of antibodies from a series of patients all having a particular disease as compared to non-disease controls;
detecting an of increase of antibodies as non-disease control; and
inspecting sera from a patient of unknown disease state to match with patient antibody array pattern of detection to diagnose the specific disease of the patient.

13.   (Withdrawn) A database comprising the epitopes of claim 11.

14.   (Withdrawn) A method for selecting indicative epitopes indicative of disease for use in disease screening using labeled phage bearing markers of disease and antibody reactions.

15.   (Withdrawn) A method for processing data in order to eliminate artifacts and normalize the data with respect to various sources of variance.

16.   (Withdrawn) A tool for interpreting results of a disease screening, said tool comprising an computer program for analyzing the results of screens.

17.   (Withdrawn) A method of creating an array of markers for diagnosing presence of cancer or determining cancer stage, said method comprising the steps of:

selectively biopanning sera obtained from a patient to obtain an array for analysis; and

detecting markers which are present only in the sera of patients with a specific disease thereby creating an array for use in diagnosing disease.

18.   (Withdrawn) The method according to claim 17, wherein said biopanning step includes subtractively biopanning the sera.

19.   (Withdrawn) A biochip for detecting the presence of a microbe in a patient's sera, said microchip comprising:

a biochip and detection means contained within the microchip for detecting microbes in a patient's sera.